

Dogs Under Attack by Africanized Honeybees

by **C. Patrick Ryan, DVM, MPH, ABVP**
Veterinary Public Health, Disease Control Programs
Los Angeles County Department of Health Services

Africanized honeybees, noted for their aggressive stinging behavior, are descendants of escaped African bees imported into Brazil in 1956. Since then, they have been moving north at the rate of approximately 300 miles a year or nearly a mile a day. In Latin America during the past four decades, Africanized honeybees have been blamed for killing hundreds of people on their trek north. It is their aggressive nature and their instinct for ganging up on victims

to protect colonies that resulted in Africanized honeybees being called killer bees.

The first U.S. death was an 82-year-old man who attempted to burn out a bee colony in his Texas home. Since 1993, the Africanized honeybees have killed five people (Texas-2, Arizona-3) in the United States. The bees attack viciously over and over when disturbed. One Arizona victim was cleaning out a mobile home and was sud-

denly attacked by hundreds of bees. He ran to the doorstep of a nearby home and 911 was called. The victim's head was covered with bees. He collapsed and died within an hour.

Arrival in California

In July of 1994, Africanized honeybees were detected in a Dutch cargo ship arriving in Los Angeles from Guatemala. The captain of the ship alerted authorities he had a swarm of bees stowed away in a latch hole before he arrived. Officials boarded the ship and wiped out the bees. In 1994, after arrival by ground in San Diego County, the bees slowly spread northward, but have recently quintupled their numbers in southeastern part of the state.

As of August 1998, Africanized honeybees have been detected in four Southern California counties (Imperial, San Diego, Riverside, and San Bernardino). There are different theories as to why the killer bees have recently increased their numbers. Heavy El Niño rains and cooler weather increased nectar and pollen production in plants aiding in the northward spread of the bees.

One recent problem for feral and domestic honeybees are varroa mites that can kill off a bee colony in 6-18 months. The Africanized honeybees may be slightly more resistant to the mite giving them the advantage. Commercial bees survive because beekeepers treat for the mite with insecticide strips. Still, beekeepers are worried as mites in four states have developed pesticide-resistance leaving beekeepers defenseless. United States scientists are considering introducing Asian-hatched honeybees, renowned for their resistance to mites.

The first human multiple sting incident in California occurred in Blythe in Novem-

ber of 1995. Since then, there have been seventeen more multiple sting incidents. To date, no human deaths have been recorded in California. The first animal incident involved a dog in Imperial County who was stung numerous times in May 1998. Since then, five other dogs have been attacked by the killer bees. Three of the six dogs died. The last recorded attack occurred July 1998. Bee trapping and monitoring are routinely conducted in Southern California.

Bees Useful in California

The press reports on killer bees have some people wondering why have bees around anyway. Bees are entirely dependent on flowers for food, which consists of pollen and nectar. Without bees we would not have many of our flowing plants. In California, commercial bees are essential to the annual pollination of \$4 billion of crops, including almonds, cherries, plums and apples. Beekeepers also sell about \$17 million worth of honey yearly.

Bee Stings

Bees may place their hives where people are likely to disturb them, in mailboxes, utility meter boxes, under porches, and in old tires. A bee stings once and dies whereas wasps can sting numerous times in succession. When the bee stings, its stinger is left in the victim and the bee subsequently dies. The venom glands attached to the stinger continues to inject venom which produces an alarm odor that attracts other bees. Stingers embedded in the skin should be scraped or brushed off with a fingernail or credit

card, but not removed with forceps, which may squeeze more venom out of the venom sac.

Young children and the elderly are more at risk to swarm attacks because they cannot escape as easily as others. Most people can absorb several bee stings with only itchy, uncomfortable swelling resulting, although some people are highly allergic to bee venom. Persons with a history of allergy to insect stings should carry a sting kit with a preloaded syringe containing epinephrine for self-administration.

Veterinarians often treat single bee stings. Dogs may try to “catch” bees with their mouths and thus are often bitten around the face. However, Africanized honeybees typically involve multiple stings, often hundreds, in a short period of time. Do not attempt to approach an individual being stung without some sort of protection (such as bee keepers suit or inside a closed car) or the bees will attack you also. If an animal runs to you with aroused bees following it, you are likely to be stung too.

Comparison of European Bee and Africanized Bee

To the naked eye, the European or common honeybee and Africanized bee appear the same. The Africanized bee’s sting is no more harmful than the European bee’s sting.

In the Event That a Swarm Attacks You

- Cover your head without blocking your vision.
- Run into a closed building or vehicle for protection.
- If serious call 911.
- Do not stand still or crawl into a hole.
- Do not go into pools, ponds, etc., as the bees will wait for you to come out.
- Do not slap at bees as this only incites them.
- Inform Agricultural commissioner of the attack.

The most important difference is their behavior. The Africanized bees have an easily-triggered defensive instinct and react six times as fast as the European honeybees when the hive is disturbed. The bees attack in large numbers and pursue over a greater distance for a longer period of time. Once agitated Africanized bees take longer to calm down. The familiar honeybees are very docile in comparison. When the Africanized bees attack in such large numbers the victim receives a massive dose of venom.

References

1. 1998 Los Angeles Africanized Honey Bee Task Force
2. Kan-Rice P: Scientists see spike in Africanized bee numbers. *California Agriculture* 52(2):7- 8. March/April 1998
3. Page RE: Varroa mite impacts Africanized bee spread and beekeeping. *California Agriculture* 52(2):9-12. March/April 1998
4. Raloff J: Russian Queens Bee-little Mites’ Impact. *Science News* 154(6):84. 1998
5. Thomas CU: Africanized Honeybees, 1994. *PULSE* 36(5):13-14 May 1994

Protecting Animals

- Keep dogs under control when hiking. A dog bounding through the brush is more likely to disturb bees than one following quietly at your side.
- Make regular inspection of your property for bee hives. Look for active bees and listen for buzzing or humming sound.
- Stay alert when horseback riding through brush or under low hanging branches, where bees might nest.
- Do not pen, tie or tether animals near known bee hives or nests.

Tips to Avoid Killer Bees

- Stay away from hives and swarms.
- Bee-proof your home by sealing cracks and areas under eaves where bees can build hives.
- Clean up empty containers such as flower pots, old tires, etc. where bees can live.
- Call an exterminator if a swarm arrives.